

CONTACT US

Steelworks Engineering Sdn Bhd (113732-U)
 Steelworks Industries Sdn Bhd (151462-U)
 Lot 3, Jalan CJ5
 Cheras Jaya Industrial Estate
 Balakong, 43200 Selangor D.E
 Malaysia

T +603 9074 8888
F +603 9075 3333
E enquiry@sunnik.com.my
W www.sunnik.net

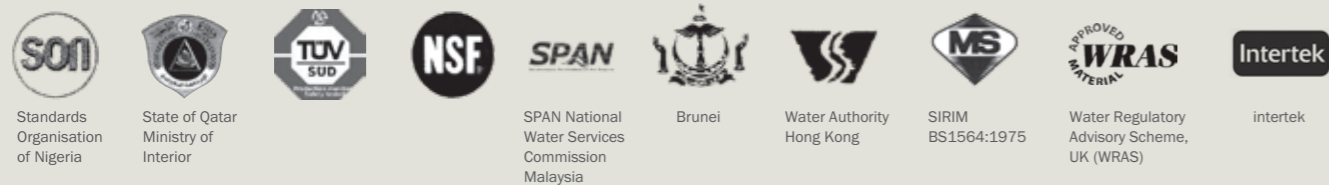
MEMBER OF:



COMPANY CERTIFICATION:



PRODUCT CERTIFICATION:



THE PRODUCTS



PRESSED STEEL SECTIONAL PANEL TANK

Economical, flexible and recyclable containment system for food & factory production, air-cond make up, fire protection, industrial liquid, potable water, commercial, mining and waste water industries.





1



2



3



4

PROJECTS HIGHLIGHT:

- 1. Petronas Twin Towers, Malaysia**
- 2. The King's Palace, Thailand**
- 3. Burj Khalifa, UAE**
- 4. Doha's Sport City Tower**
- 5. Berekum Ghana**



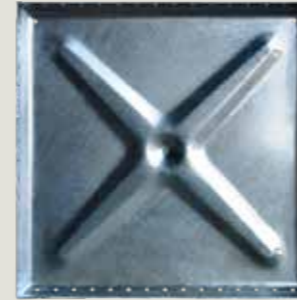
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PANEL SELECTIONS

Size:
1.22M X 1.22M
1.00M X 1.00M

MAJOR PROJECTS

With our experience, expertise and ability to provide world-class quality, we and our team have successfully supplied and commissioned prestigious projects worldwide.



HOT DIP GALVANISED (HDG)
HDG+HDPE (OPTIONAL)



PRIMER COATED FIRE FIGHTING



EXPOXY COATED



STAINLESS STEEL
AISI SS316L/SS304/SS444

AFGHANISTAN
• Kabul International Airport
• US Army Corps of Engineers

ANGOLA
• Cabinda

AUSTRALIA
• Perth

BRUNEI
• Bandar Seri Begawan
• Terumbong

BOTSWANA
• Zwanshambe

CAMBODIA
• Fraser & Neave, Phnom Penh

CHINA
• Nansha G E Plastic, Guangzhou

COLOMBIA
• US Embassy

CONGO
• Lumbubashi
• Gemena

CYPRUS
• Larnaca International Airport

ETHIOPIA
• Inceno

GHANA
• Amhara Regional State
• Berekum

GAMBIA
• Gunjur

GUAM
• Agat Santa Rita Treatment Plant
• Marks Hardware
• Ukudo Warehouse
• 4 Towers

HONG KONG SAR
• Chek Lap Kok International Airport

INDONESIA
• South Sulawesi
• Jakarta
• Kalimantan
• Batam

IRAN
• Bandar Abbas, Ahvaz

IRAQ
• Ministry of Interior, Baghdad
• Basrah Water Tower (BWT)
• Al-Semawa Housing Project

JORDAN
• Amman

LAOS
• Vientiane Airport
• MMG LXML

MALAYSIA
• BP Castrol Lubricants, Port Klang
• Motorola Semi Conductor
• Panasonic Kulim Kedah
• Fraser & Neave (Coca Cola)
• Shangri-la Hotel (K.L.)
• KL International Airport I & II
• KLCC Petronas Twin Tower
• Bakun Hydroelectric Dam, Sarawak
• Intel Bayan Lepas

MALAWI
• Mongochi

MAURITIUS
• Port Louis

MOZAMBIQUE
• Radisson Hotel, Maputo

MALDIVES
• Centara Grand Island Resort & Spa

MYANMAR
• Yangon International Airport
• Myanmar Brewery, Yangon
• CNF Yangon Port

NAMIBIA
• Textile Factory Namibia

NIGERIA
• Shell Petroleum Development
• CFR Port Onne
• Reliance Hospital, Abuja
• Technip Office Building, Lagos
• Victoria Island, Lagos
• Tropicana Mall & Theme Park
• Millenium Tower
• Ido Ani Water Scheme

OMAN
• Muscat International Airport

PAKISTAN
• Techno AutoGlass Plant, Karachi

PHILIPPINES
• Southern Luzon Hospital
• Motorola Philippines
• Skyway
• IPI / Big Blue 6

QATAR
• The Sports City Tower, Doha
• Musherib Substation
• Qatar International Airport
• Al Jazeera Studio
• Lagoon Plaza
• Siemens ABB Sub Station
• Lusail Sub Station
• Qatar Transmission Substation
• National Convention Car Park
• Abu Nakha Sub Station
• Logistics Zone Super Sub Station
• Toyota Warehouse
• Zig Zag Building

REPUBLIC OF TOGO
• Volta Region

PAPUA NEW GUINEA
• Nambawan Lae P&G - Water Lines

SINGAPORE
• AT & T
• Police Dog Unit
• DBS Bank
• Shell Tower

SOUTH AFRICA
• Cape Town

SIERRA LEONE
• Fourbay College

SRI LANKA
• University Peradeniya
• Jungle Beach Resort

KINGDOM OF SAUDI ARABIA
• Tadawul Tower

THAILAND
• The King of Thailand Palace
• Western Digital
• Japan Embassy, Bangkok

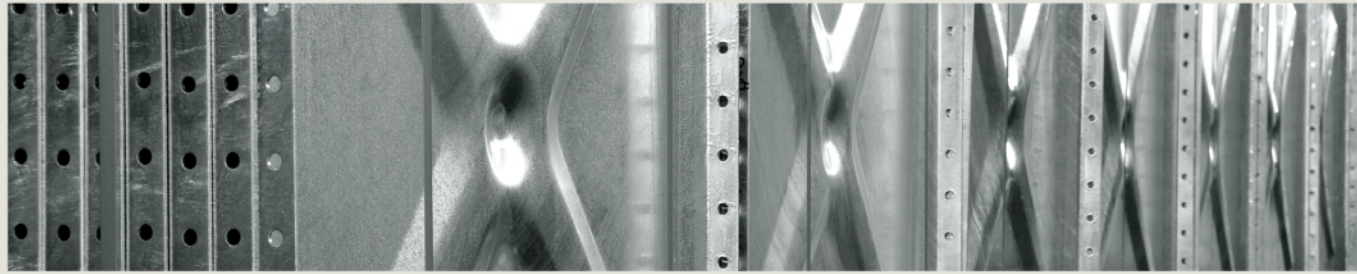
TRINIDAD & TOBAGO
• Point Lisas

TANZANIA
• Zanzibar Port

U.A.E
• Burj Khalifah, Dubai
• Reverse Osmosis Desalination Plant
• Training Center of Sawaeed Investment LLC
• Al Quoz 4th Dubai, U.A.E

U.S.A
• Tamuning, Guam
• Long Island, New York
• Hudson Yards Redevelopment

VIETNAM
• Hanoi Petroleum Centre
• HungYuong Plaza, Ho Chi Mihn City
• Hoan Cao Plaza Hotel, Nha Thrang
• First Solar
• Mekophar
• Lim3
• Trucbach



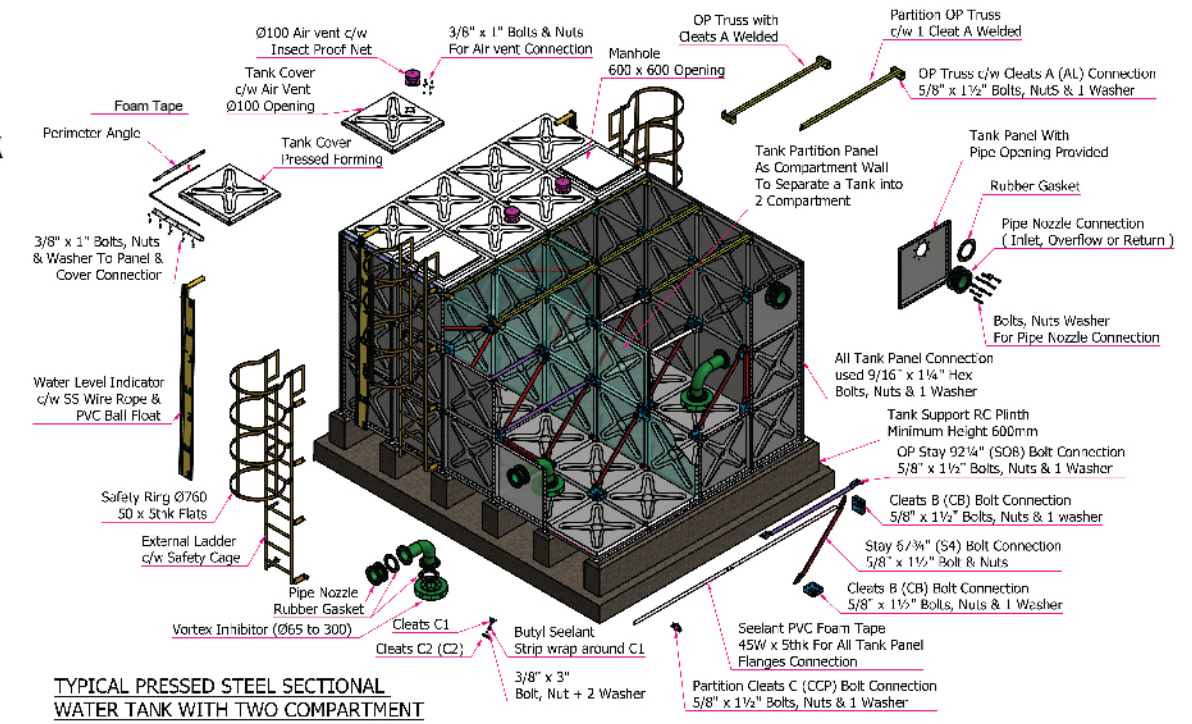
MANUFACTURING SPECIFICATIONS

Standard	SUNNIK pressed steel sectional water tanks constructed with hydraulically pressed external flanged panels at an angle of 45° and 90° to face of panel conforming to British Standard 1564:1975 (Type I & Type II).	
Materials	The mild steel used in the manufacture of the panels, stays, cleats and pads is of BS EN 10025:2004 Grade S275 or its equivalent.	
Tank Panels	Tank panels of 1.22m x 1.22m or 1.0m x 1.0m, 0.5m x 1.0m, 0.6m x 1.22m & 0.5m x 0.5m square panels are available on request.	
Tank Roof Cover	Tank covers of 1.5mm and 3.0mm thick are hydraulically pressed to 1.22m x 1.22m or 1.0m x 1.0m square; pitch or dome shape roof covers can be supplied upon request.	
Stays & Cleats for Internal Reinforcement	The sides and ends of tank interior are supported by angle stays of similar finish at the junction of two or more plates; other additional finishes can be supplied upon request. Angle Stays are connected from sides to bottom, ends to bottom and/or horizontally sides to sides and sides to ends subject to manufacturer's design and details.	
External Reinforcement	Hot dipped galvanized UB steel beams are reinforced externally with brackets with no internal bracings, eliminating corrosion and contamination to water	
Bolts & Nuts	Bolts, nuts and washers are conform to BS 4190 or equivalent where necessary as determined by manufacturer.	
Sealing Materials	Where necessary, non-toxic sealant and compound or equivalent are supplied for all tank panel joints and tested to BS6920. "SUNNIK" EPDM Washers are available on request.	
Manholes & Vent	Lockable access manhole 600mm square are provided for each tank or compartment with 50mm & 100mm with Ø150 insect proof air vent.	
Ladders	Hot dipped galvanised, aluminium or equivalent type are provided for both internal and external of tank. Safety cage are available during enquiry.	
Level Indicator	Standard mechanical mild steel level indicator indirect reading or equivalent are provided. Galvanised type or Acrylic direct reading are available upon request during enquiry.	
Packing	Each bundle with markings is palletised and with coated strapped (where applicable).	
Certification & Compliance	SPAN, SIRIM, TUV, SUD, BS1564:1975 (Revised) with 1983 amendments for storage of liquids density of 1.0 at ambient temperature (30 °C) and pH level 6-8.	
Material Thickness Approved	Tanks 1.22M Height:	Bottom, sides and ends – 5.0mm thick
	Tanks 2.44M Height:	Bottom, sides and ends – 5.0mm thick
	Tanks 3.66M Height:	Bottom, sides and ends – 5.0mm thick
	Tanks 4.88M Height:	Bottom and 1st tier of sides and ends – 6.0mm thick 2nd, 3rd and top tiers of sides and ends – 5.0mm thick
	Tanks 1, 2, 3 & 4M Height:	Thickness subject to manufacturing standards
Finishes	Hot Dipped Galvanised (HDG) HDG + High Density Polyethylene Geomembrane (HDPE)	- ISO 1461 : 2009 - Thickness subject to manufacture standards
	Stainless Steel Epoxy Primer Coated	- AISI 304 / 316L / SS444 - Coating Min 100 micron DFT - One coat internal bitumen & one coat external red oxide

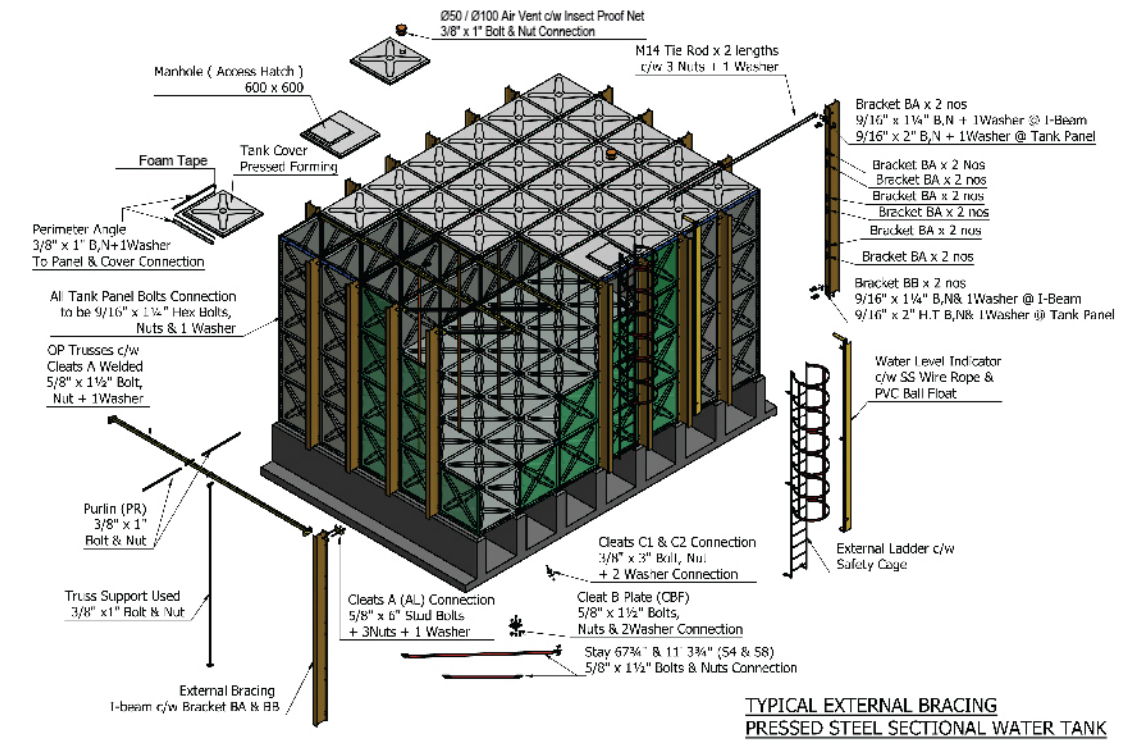
Notes

- Manufacturing specifications are subject to change without prior notice.
- Manufacturing specifications can be customised to buyer's requirement subject to manufacturer's approval and safety compliance.
- SUNNIK tank recommended to be installed by its appointed or approved skilled installer or supervise by our authorised supervisor only.
- SUNNIK tank recommended to be checked and certified by its technician upon complete installation and prior filling of water to ensure performance otherwise warranty shall be revoked automatically.
- SUNNIK Warranty is issued upon complete sales payment and subject to term & conditions of tank.
- Installation Manual and Tank Operation & Maintenance Handbook are provided for SUNNIK tank product on request.

ISOMETRIC VIEW OF INTERNALLY BRACED TANK TYPE 1

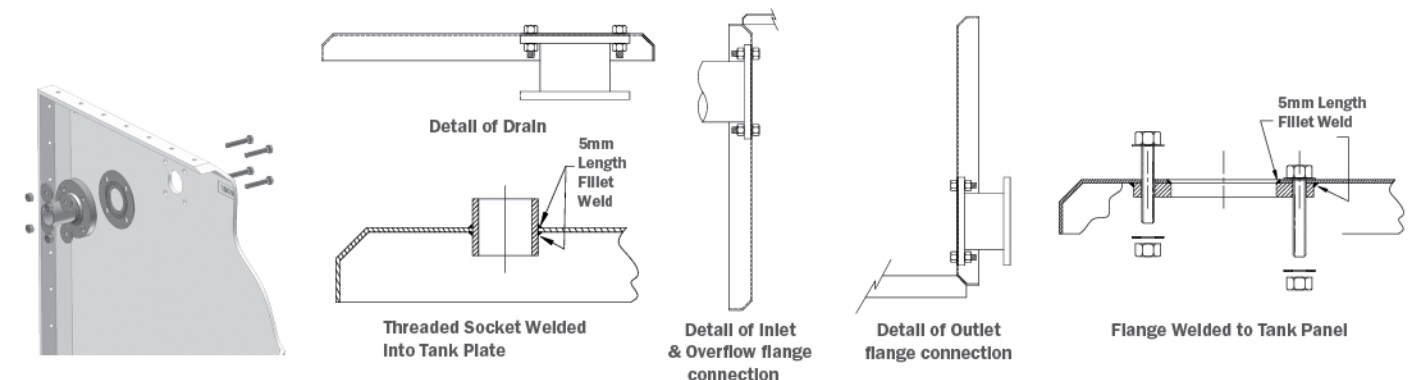


ISOMETRIC VIEW OF EXTERNALLY BRACED TANK TYPE 1

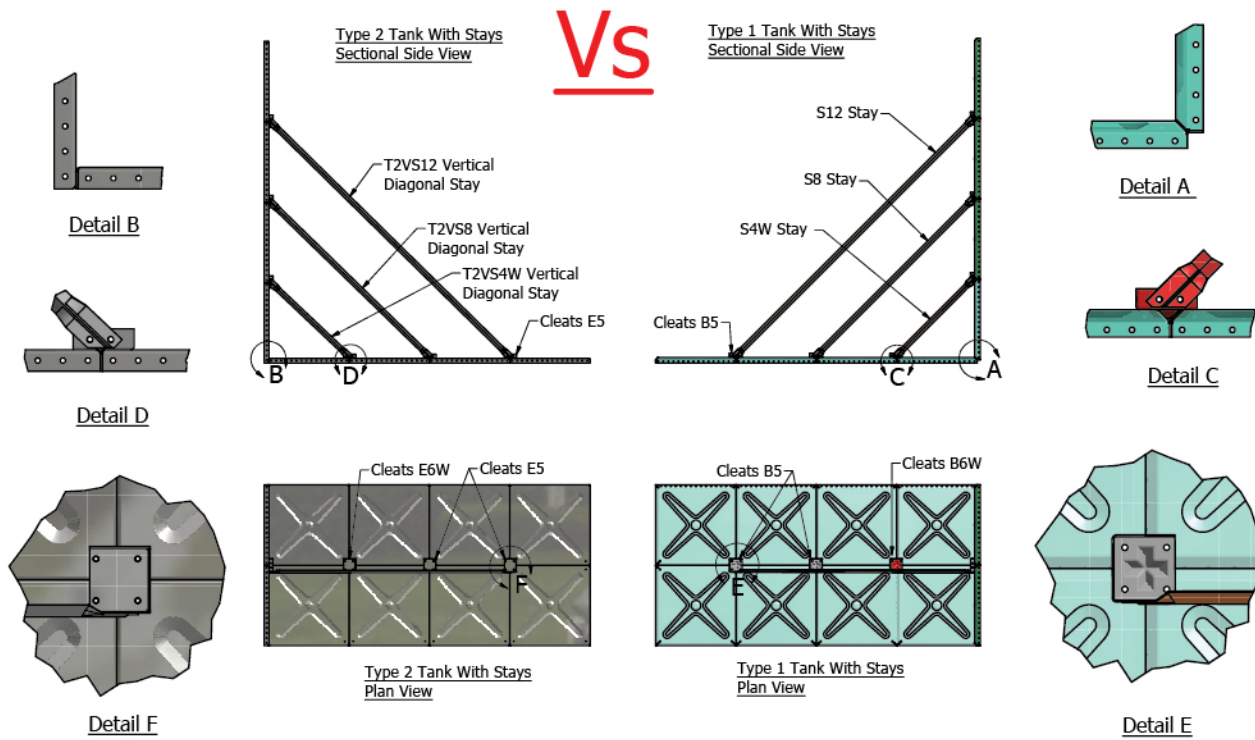
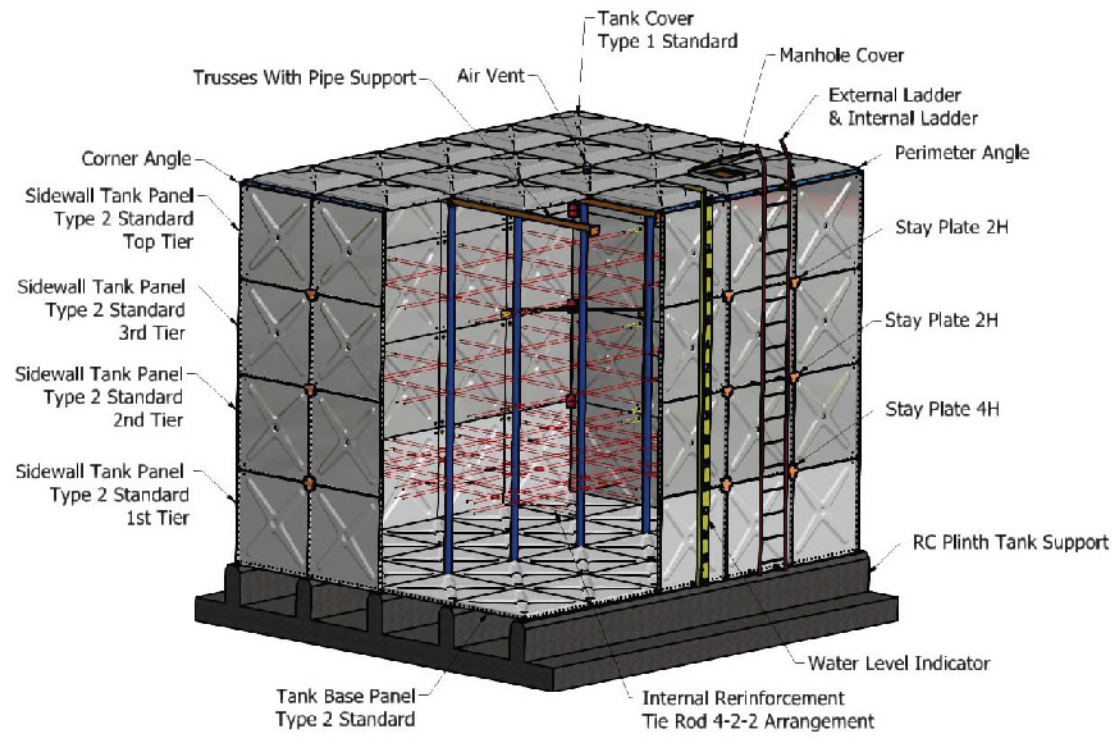


TYPICAL PIPE CONNECTION

Note: Standard pipe opening ONLY will be provided. Nozzles portrayed here can be either flanged, welded or screwed type will be provided upon request by buyer during enquiry.



**ISOMETRIC
VIEW OF
INTERNALLY
BRACED TANK
TYPE 2**



CAPACITY TABLE: 1.00 METER X 1.00 METER PANEL (METRIC SIZE PANEL)

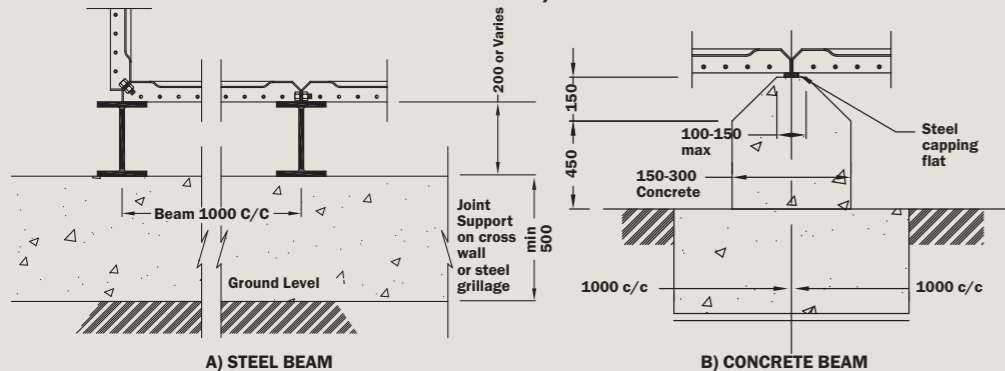
Table of sizes, approximate weights and nominal capacity of tanks with external flanges-B.S. 1564:1975 (revised)

Height of Tank 1,000MM					Height of Tank 2,000MM				
Length x Breath		Nominal Capacity**			Length x Breath		Nominal Capacity**		
mm	Plates*	M ³	Gallons**	Approx. empty tank Wt. MT	mm	Plates*	M ³	Gallons**	Approx. empty tank Wt. MT
2000 x 1000	8	2	440	0.41	2000 x 1000	14	4	880	0.76
3000 x 1000	11	3	660	0.56	3000 x 1000	19	6	1320	1.07
4000 x 1000	14	4	880	0.76	4000 x 1000	24	8	1760	1.32
2000 x 2000	12	4	880	0.66	2000 x 2000	20	8	1760	1.12
3000 x 2000	16	6	1320	0.87	3000 x 2000	26	12	2640	1.43
4000 x 2000	20	8	1760	1.06	4000 x 2000	32	16	3520	1.73
5000 x 2000	24	10	2200	1.27	5000 x 2000	38	20	4400	2.19
3000 x 3000	21	9	1980	1.12	3000 x 3000	33	18	3960	1.87
4000 x 3000	26	12	2640	1.37	4000 x 3000	40	24	5280	2.25
5000 x 3000	31	15	3300	1.63	5000 x 3000	47	30	6600	2.63
6000 x 3000	36	18	3960	1.88	6000 x 3000	54	36	7920	3.11
4000 x 4000	32	16	3520	1.67	4000 x 4000	48	32	7040	2.75
5000 x 4000	38	20	4400	1.98	5000 x 4000	56	40	8800	3.17
6000 x 4000	44	24	5280	2.29	6000 x 4000	64	48	10560	3.61
7000 x 4000	50	28	6160	2.64	7000 x 4000	72	56	12320	4.08
8000 x 4000	56	32	7040	2.95	8000 x 4000	80	64	14080	4.45
5000 x 5000	45	25	5500	2.34	5000 x 5000	65	50	11000	3.58
6000 x 5000	52	30	6600	2.75	6000 x 5000	74	60	13200	4.07
6000 x 6000	60	36	7920	3.15	6000 x 6000	84	72	15840	4.65
7000 x 6000	68	42	9240	3.58	7000 x 6000	94	84	18480	5.17
7000 x 7000	77	49	10780	4.08	7000 x 7000	105	98	21560	5.74

Height of Tank 3,000MM					Height of Tank 4,000MM				
Length x Breath		Nominal Capacity**			Length x Breath		Nominal Capacity**		
mm	Plates*	M ³	Gallons**	Approx. empty tank Wt. MT	mm	Plates*	M ³	Gallons**	Approx. empty tank Wt. MT
3000 x 3000	45	27	5940	2.98	3000 x 3000	57	36	7920	4.01
4000 x 3000	54	36	7920	3.61	4000 x 3000	68	48	10560	4.78
4000 x 4000	64	48	10560	4.27	4000 x 4000	80	64	14080	5.69
5000 x 4000	74	60	13200	4.98	5000 x 4000	92	80	17600	6.56
5000 x 5000	85	75	16500	5.74	5000 x 5000	105	100	22000	7.47
6000 x 5000	96	90	19800	6.51	6000 x 5000	118	120	26400	8.38
6000 x 6000	108	108	23760	7.32	6000 x 6000	132	144	31680	9.39
7000 x 6000	120	126	27720	8.18	7000 x 6000	146	168	36960	10.42
8000 x 6000	132	144	31680	8.99	8000 x 6000	160	192	42240	11.43
7000 x 7000	133	147	32340	9.09	7000 x 7000	161	196	43120	11.54
8000 x 7000	146	168	36960	9.97	8000 x 7000	176	224	49280	12.6
9000 x 7000	159	189	41580	10.88	9000 x 7000	191	252	55440	13.72
8000 x 8000	160	192	42240	10.98	8000 x 8000	192	256	56320	13.81
9000 x 8000	174	216	47520	11.94	9000 x 8000	208	288	63360	14.94
10000 x 8000	188	240	52800	12.96	10000 x 8000	224	320	70400	16.16
9000 x 9000	189	243	53460	13.01	9000 x 9000	225	324	71280	16.25
10000 x 10000	220	300	66000	15.19	10000 x 10000	260	400	88000	18.8
11000 x 10000	236	330	72600	16.31	11000 x 10000	278	440	96800	20.36
11000 x 11000	253	363	79860	17.53	11000 x 11000	297	484	106480	21.73
12000 x 11000	270	396	87120	18.75	12000 x 11000	316	528	116160	22.98
12000 x 12000	288	432	95040	19.98	12000 x 12000	336	576	126720	24.67
13000 x 12000	306	468	102960	21.34	13000 x 12000	356	624	137280	26.15
13000 x 13000	325	507	115400	22.76	13000 x 13000	377	676	148720	27.65

Note: *Number of plates does not include partition plates and tank covers. Thickness subject to finishes & type of tank.
 **a) Nominal capacity are without allowance for freeboard. (Basing on 6.25imp. gallon per cu.ft).
 **b) To estimate net capacity a reduction from 12.5% on smaller tanks to 2.5% on larger tank should be allowed.

TYPICAL TANK SUPPORT @ 1.00M C/C



- All measurement in mm.
 - Tank above 3000mmHt, steel capping flats shall be provided by purchaser on top of tank concrete support to ensure proper leveling and uniform distribution load.
 - Support shall be effectively supported continuously under each bottom plate's flange in one direction @ 1000mm centres exceeding 150mm the length or breath of tank. Tolerance of ±6.0mm for level and diagonals between each row of support.
 - Min. clearance of 500mm shall be provided all around the outside or underneath of tank for erection and maintenance purpose. Min 750mm clearance at roof top for ease access via 600mm manhole hatch.

CAPACITY TABLE: 1.22 METER X 1.22 METER PANEL (IMPERIAL SIZE PANEL)

Table of sizes, approximate weights and nominal capacity of tanks with external flanges-B.S. 1564:1975 (revised)

Height of Tank 1220mm (4 feet)						Height of Tank 2440mm (8 feet)					
Length x Breath		Nominal Capacity**				Length x Breath		Nominal Capacity**			
mm	Feet	Plates* 5mm	M ³	Gallons**	Approx. empty tank Wt. MT	mm	Feet	Plates* 5mm	M ³	Gallons**	Approx. empty tank Wt. MT
1220 x 1220	4 x 4	5	1.82	400	0.40	2440 x 1220	8 x 4	8	3.64	800	0.65
2440 x 1220	8 x 4	8	3.64	800	0.65	3660 x 1220	12 x 4	11	5.45	1200	0.85
3660 x 1220	12 x 4	11	5.45	1200	0.85	4880 x 1220	16 x 4	24	14.55	3200	2.05
2440 x 2440	8 x 8	12	7.27	1600	0.95	2440 x 2440	8 x 8	20	14.55	3200	1.65
3660 x 2440	12 x 8	16	10.91	2400	1.25	3660 x 2440	12 x 8	26	21.82	4800	2.15
4880 x 2440	16 x 8	20	14.55	3200	1.55	4880 x 2440	16 x 8	32	29.09	6400	2.65
3660 x 3660	12 x 12	21	16.36	3600	1.65	3660 x 3660	12 x 12	33	32.73	7200	2.70
6100 x 2440	20 x 8	24	18.18	4000	1.90	6100 x 2440	20 x 8	38	36.36	8000	3.10
4880 x 3660	16 x 12	26	21.82	4800	2.05	4880 x 3660	16 x 12	40	43.64	9600	3.25
6100 x 3660	20 x 12	31	27.27	6000	2.45	6100 x 3660	20 x 12	47	54.55	12000	3.85
4880 x 4880	16 x 16	32	29.09	6400	2.55	4880 x 4880	16 x 16	48	58.18	12800	3.95
7320 x 3660	24 x 12	36	32.73	7200	2.85	7320 x 3660	24 x 12	54	65.45	14400	4.40
6100 x 4880	20 x 16	38	36.36	800	3.00	6100 x 4880	20 x 16	56	72.73	16000	4.60
8540 x 3660	28 x 12	41	38.18	8400	3.30	8540 x 3660	28 x 12	61	76.36	16800	5.00
7320 x 4880	24 x 16	44	43.64	9600	3.45	7320 x 4880	24 x 16	64	87.27	19200	5.30
6100 x 6100	20 x 20	45	45.45	10000	3.55	6100 x 6100	20 x 20	65	90.91	20000	5.45
8540 x 4880	28 x 16	50	50.91	11200	4.00	8540 x 4880	28 x 16	72	101.82	22400	6.00
7320 x 6100	24 x 20	52	54.55	12000	4.10	7320 x 6100	24 x 20	74	109.09	24000	6.05
9760 x 4880	32 x 16	56	58.18	12800	4.60	9760 x 4880	32 x 16	80	116.36	25600	6.70
7320 x 7320	24 x 24	60	65.45	14400	4.65	7320 x 7320	24 x 24	84	130.91	28800	6.95
8540 x 8540	28 x 28	77	89.09	19600	6.05	8540 x 8540	28 x 28	105	178.18	39200	8.60

Height of Tank 3660mm (12 feet)						Height of Tank 4880mm (16 feet)					
Length x Breath		Nominal Capacity**				Length x Breath		Nominal Capacity**			
mm	Feet	Plates* 5mm	M ³	Gallons**	Approx. empty tank Wt. MT	mm	Feet	5mm 6mm	M ³	Gallons**	Approx. empty tank Wt. MT
3660 x 3660	12 x 12	45	49.09	10800	4.50	3660 x 3660	12 x 12	36 21	65.45	14400	6.25
4800 x 3660	16 x 12	54	65.45	14400	5.45	4800 x 3660	16 x 12	42 26	87.27	19200	7.60
4800 x 4800	16 x 16	64	87.27	19200	6.45	4800 x 4800	16 x 16	48 32	116.36	25600	8.75
6100 x 4880	20 x 16	74	109.09	24000	7.50	6100 x 4880	20 x 16	54 38	145.45	32000	10.05
6100 x 6100	20 x 20	85	136.36	30000	8.55	6100 x 6100	20 x 20	60 45	181.82	40000	11.50
7320 x 6100	24 x 20	96	163.64	36000	9.80	7320 x 6100	24 x 20	66 52	218.18	48000	13.00
7320 x 7320	24 x 24	108	196.36	43200	10.95	7320 x 7320	24 x 24	72 60	261.82	57600	14.60
8540 x 7320	28 x 24	120	229.09	50400	12.30	8540 x 7320	28 x 24	78 68	305.45	67200	16.10
8540 x 8540	28 x 28	133	267.27	58800	13.65	8540 x 8540	28 x 28	84 77	356.36	78400	17.75
10980 x 8540	36 x 28	159	343.64	75600	16.35	10980 x 8540	36 x 28	96 95	458.18	100800	21.10
9760 x 9760	32 x 32	160	349.09	76800	16.45	9760 x 9760	32 x 32	96 96	465.45	102400	21.30
10980 x 9760	36 x 32	174	392.73	86400	17.95	10980 x 9760	36 x 32	102 106	523.64	115200	23.20
12200 x 9760	40 x 32	188	436.36	96000	19.40	12200 x 9760	40 x 32	108 116	581.82	128000	24.90
10980 x 10980	36 x 36	189	441.82	97200	19.50	10980 x 10980	36 x 36	108 117	589.09	129600	25.30
12200 x 10980	40 x 36	204	490.91	108000	21.05	12200 x 10980	40 x 36	114 128	654.55	144000	26.95
12200 x 12200	40 x 40	220	545.45	120000	22.80	12200 x 12200	40 x 40	120 140	727.27	160000	29.00
13420 x 12200	44 x 40	236	600.00	132000	24.45	13420 x 12200	44 x 40	126 152	800.00	176000	31.00
13420 x 13420	44 x 44	253	660.00	145200	26.35	13420 x 13420	44 x 44	132 165	880.00	193600	33.25
14640 x 13420	48 x 44	270	718.18	158400	28.10	14640 x 13420	48 x 44	138 178	960.00	211200	35.35
14640 x 14640	48 x 48	288	785.45	172800	30.05	14640 x 14640	48 x 48	144 192	1047.27	230400	37.60
15860 x 14640	52 x 48	306	850.91	187200	31.90	15860 x 14640	52 x 48	150 206	1134.55	249600	39.90
15860 x 15860	52 x 52	325	921.82	202800	33.95	15860 x 15860	52 x 52	156 221	1229.09	270400	42.30

Note: *Number of plates does not include partition plates and tank covers.
 **a) Nominal capacity are without allowance for freeboard. (Basing on 6.25imp. gallon per cu.ft).
 **b) To estimate net capacity a reduction from 12.5% on smaller tanks to 2.5% on larger tank should be allowed.

TYPICAL TANK SUPPORT @ 1.22M C/C

